

GP-303650

OIL PRESSURE CONTROL SYSTEM AND METHOD FOR
ENGINES WITH HYDRAULIC CYLINDER DEACTIVATION

ABSTRACT OF THE DISCLOSURE

An oil lubrication and control system, for an engine having cylinder deactivation switching lifters operated at the pressure of the full oil system, is provided with an auxiliary pressure relief valve which opens to control maximum oil pressure in the system whenever the engine speed and temperature conditions lie beyond the ability of the oil pump pressure control unit to maintain the maximum pressure limit. Addition of the auxiliary pressure relief valve allows extended operation of the switching lifters, which are limited by their construction to operation below a prescribed pressure limit. In a preferred embodiment, the auxiliary pressure relief valve is mounted in the engine crankcase in a bore connected directly with the main oil gallery to provide mounting and actuation of the auxiliary pressure relief valve with a minimum of modifications to the engine oil system design.